



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE PSYCHOLOGY OF MENTAL ARRANGEMENT.

By I. MADISON BENTLEY.

Mind is framed on a definite and intelligible plan. Its design is apparent, not to the psychologist, alone, but to any one who is accustomed to reflect on the nature of mental experience. Even if it were possible to overlook the regularity and the uniformity of one's own conscious processes, there would remain, in the orderly arrangement of the objects of knowledge, a sufficient objective guaranty for the orderliness of mind itself. But, although an orderly world implies an orderly consciousness, it must not be assumed, forthwith, that the two orders are identical; that one type of arrangement is common to physical and mental existences. Such an assumption is as premature as is the inference from the nature of physical elements to the nature of mental elements, as set forth in the various 'copy' theories of mind. The actual type of arrangement—within mind, no less than without it—must be determined empirically. Now, the problem of mental arrangement involves such an empirical inquiry into the nature of mental connections. Its solution means the setting forth of all the typical patterns or modes of arrangement into which mental processes fall. This is no depreciation of the worth of analysis. No one can deny that an accurate inventory of things mental is an extremely important part of the psychologist's account of mind; but such an inventory does not properly complete the account. The psychologist must, also, explain just how one mental element fits into another, how part-processes are set into groups and how a well-ordered consciousness differs from a mere collection of sensations, ideas and feelings. Arrangement is no less essential to mind than is the mere existence of elementary structures. And but little reflection is needed to convince one that analysis—no matter how searching and thorough—cannot set forth the entire plan of mind. Even when analysis has reached the last irreducible bits of consciousness, the task of reversing the process still remains. One has yet to discover what has actually been done to consciousness in the process of abstraction and, also, what must be done to consciousness to restore the abstracted elements to the tissue of mind. That is to say, mind must be described in synthetic as well as analytic terms.

Until analysis had been carried to the extreme histological limits which refined methods have made possible, it was customary to solve the problem before us either in terms of association or of intellection; to have recourse either to a "gentle force," as Hume puts it, which brings ideas to mind, one after another, or to an active mental principle which sets in orderly arrangement the materials of sense. But the venue of the case has been changed several times since the days of the associationists and the intellectualists. Instead of seeking to lay a basis for knowledge, by enumerating the likenesses and differences among the objects of ideas, the psychologist sets aside the problem of knowledge and inquires directly into the modes of connection obtaining between mental processes themselves. Furthermore, he pushes the question beyond the train of ideas and seeks to make out the connections among simpler and simpler compounds, until he comes upon the very last terms of analysis and the relations that obtain between these in mental structure. It must also be noticed that this change of procedure has involved a change of emphasis. Attention has been directed from the powers and forces which were formerly thought to furnish the mainspring of mental activity to an empirical analysis of the actual contents of the individual mind. New elements, new arrangements, new modes of combination, have thus been brought to light.

The problem before us is one of the results of the developed analytical method. Given a number of mental elements entering into a group, can one, it asks, regard the group as, in any sense, a bare product or must a unique kind of element, as element furnished by the mind itself, be added as an essential feature of the group? Is the 'fourness' in the perception of four objects or the 'squareness' of the square, itself, an element? It is clear that the question raised is a fundamental one—one that is of vital importance to the psychological system. It is important—I scarcely need to say—because it raises the whole question of the scope and validity of analysis and of the adequacy of the type of description which limits itself to 'elemental' terms. It is the test of analysis by synthesis.

To appreciate all that the issue involves, it will first be necessary to have some notion of what the possibilities of mental arrangement are. In the first place, it is conceivable that a perception or an emotion should be made on an architectural pattern, with sensations for bricks and stones and feelings for mortar. Or the procedure may be supposed to be even simpler than that. It may be like fitting ground and polished stone into ground and polished stone, as in the foundation of a Greek temple;—a simple adhesion so firm and so close that the weight of the race's centuries makes the parts one and obliterates the

lines of junction. The architectural figure may, however, be quite wrongly applied. It is possible that mental synthesis is more like the mathematical process of summation, of adding unit to unit; or, perhaps, it is a matter of grinding-up part-processes for the manufacture of new wholes. Again, there may be a communistic participation among mental contents whereby each shares in the product of all; or, finally, mind may stand apart and spin the texture of consciousness from the raw threads of the senses.

Certain of these hypotheses, one is inclined to dismiss at once. But the very fact that the problem can be stated in so many different ways warns us that we must not beg the question at the outset by assuming the truth of any single set of terms. We shall best reach the heart of the problem, even though the procedure be somewhat slow, by tracing back the several arterial channels as they spread themselves through the literature. In fact, the first object of the present paper is to bring together the various recent contributions to the subject. These contributions have been made, for the most part, by the Austrian school of psychologists. In the current English literature, they have not received the attention that their importance seems to warrant. I shall, for this reason, give them as complete a review as my space will permit.

There is, however, one preliminary question in method which must be raised before we begin our historical section. I shall not attempt to answer it now for it will recur presently. It is this: what is the nature of analysis? It will be sufficient, for the present, to recall that there are two general types of analysis. These two types we may, for convenience sake, call the external and internal types. External analysis simplifies a mental complex by simplifying its conditions. If one wants to become acquainted with the elements of a musical note, one may sound, in turn, tuning forks (let us say) corresponding to the several parts or partials of which the note is composed. This is, of course, one of the chief functions of experiment; the simplification of an event through the simplification of its conditioning factors. On the other hand, the same note may be analyzed internally by sounding the note and then turning the attention hither and thither to 'hear out' the partials which make the simple clang. The latter type of analysis may, indeed, first reveal itself in an immediate apprehension of the whole as made up of a plurality of parts (*cf.* Stumpf's definition of analysis). Both kinds of analysis are justified in psychological procedure by their results. The great difference in the results is this: the one tears a member from its fellows, wrenches it from its setting and places it in comparative isolation; the other either subordinates a part to the whole or it

clarifies a part—makes it stand out from the whole—but does not destroy its organic connections. The part ‘heard out’ or ‘seen out’ or ‘tasted out’ is always heard or seen or tasted on a background which stands up close against it and, at the same time, sets it in relief.

It is extremely fortunate for psychology that both these methods are at hand. The experimentalist, when he is charged (usually by the sentimentalist) with lacerating mind in his vivisection, has but to turn to his alternative method and justify his account. By examining the members of a complex, now in connection and now out of connection, he comes to see exactly what the connection means and in how far it alters his elements.

We may pass now to the concrete discussions of our specific problem.

The first man to take up the question for its own sake and to treat it systematically was Chr. v. Ehrenfels, now Professor of Philosophy at Prague. Ehrenfels¹ was attracted to the question, first of all, by E. Mach’s work on the *Analysis of the Sensations* (1886). Mach had said that when we listen to a melody or look at such an object as a tree, we *sense* the melody or the tree immediately, as a whole; *i. e.*, we have sensations of spatial form and of tonal form.

To understand clearly what Mach means by a sensation of space-form or of melody, it is necessary to recall his peculiar use of the term ‘sensation.’ “The world,” he says (*Analysis of Sensations*, trans., p. 10), “consists only of our sensations;” and again, “we have knowledge *only* of sensations.” That is to say, the sensation is not simply a mental process, but a bit of knowledge. It is, moreover, distinguished from intellect by being an *immediate* bit of knowledge; what we see, hear, or handle, and not what is worked out by the understanding. These sensations, Mach analyzes in a twofold way: as mental fact or as physical fact, according to the point of view from which he regards them. Sensations are, then, the elements that make up the world. To search them out, one has only to analyze the world. The sight of a tree involves color-sensations and space-sensations. Color and form can be varied independently; changing the color does not necessitate change in form, and *vice versa*. So with a melody. Though the tonal sensations (pitches) differ, one can still have the same melody (as a tune set in different keys). This melodic form, then, which is independent of absolute pitch, is apprehended imme-

¹ *Vierteljahrsschrift für wissenschaftliche Philosophie*, Vol. XIV (1890), p. 249.

diately and is, therefore, a sensation—a time-sensation, an ultimate element in experience,—one which must, moreover, depend upon a particular system of neural processes.

This is the point at which Ehrenfels takes up the investigation. What now, he asks, first of all, are these space-forms and time-forms of Mach's? Are they simply combinations of elements or do they introduce something new; something not contained in the elements? Mach, he thinks, is not clear on this point. He proposes to work it out.

Ehrenfels puts the problem in this way: Suppose that there stands in consciousness a group of n tones forming a melody, each tone having its definite place in the series; the question arises, 'is there in the apprehension of the melody, anything more than the n individual tones taken together?' Or 'is there more in a space form than the n determinations of position?' Such a question cannot be decided by simple introspection. It is too subtle and too delicate. One must proceed, therefore, more objectively.

The presumption against a new element rests, says Ehrenfels, upon an unwarranted extension of the concept of conservation. But the principle of conservation does not apply to mind as it applies to matter. The combination of material elements is one thing; the synthesis of mental elements quite another. But if conservation does not stand in the way of new synthetic elements, neither does the principle of psychophysical parallelism. For it may well be just the physical correlate of the individual consciousness that furnishes the substrate for a new element. The very physiological condition (whatever it may be) that makes all the tones of a melody appear in a single individual's experience is sufficient to satisfy the parallelist's objections to a new element.

These theoretical difficulties settled, Ehrenfels proceeds to develop still further Mach's idea of formal elements. He proposes, as a general term, the words 'form quality' (*Gestaltqualität*). The proof for the existence of form qualities or qualities of form lies, as Mach indicated, in the similarity of groups which are made up of entirely different elements. Mach's melodies and spatial figures are good examples. Here is the argument as put forth by Ehrenfels. Complexes which are nothing but sums of elements must be more similar the greater the similarity of their several elements. But a melody in different keys—*i.e.*, with all its tones different—is more like itself than it is like another tonal sequence built upon the same elements. And the likeness is apprehended immediately, without reflection (*i.e.*, it is Mach's sensation). If one objects that the melody lies in the constant transition from tone to tone (in different keys), the term 'transition' brings in something which is more than

a sum. It is just another word for 'tonal form.' And the same is true of spatial forms. Any figure is more than a sum of positions. Ehrenfels defines form qualities, accordingly, as positive ideational contents, appearing in consciousness with such ideational complexes as are composed of separable elements. Any ideational complex which is necessary for the appearance of a form quality is called the *ground* or *basis* (*Grundlage*) of the form quality.

It is not surprising to find that Ehrenfels's broad definition yields a host of combinational qualities. All of these, the author places in one of two general classes. They fall either into the 'non-temporal' or the 'temporal' class, according as their elements are all apprehended in a single perception or require images of memory and expectation. A picture, *e. g.*, which is apprehended at a glance, involves a non-temporal form quality, while a melody or a gradually changing color is grasped as a unitary whole only by the co-operation of perceptual and memorial factors and includes, therefore, a quality of the second class.

Form qualities are, by no means, limited to Mach's tonal and spatial forms. Perception is full of them. First of all, the various determinations of visual and tactual space-perception, including the perception of movement, give a large number. Audition yields, besides the temporal form qualities of melody, the non-temporal qualities of harmony and clang color. To these are to be added color harmonies, fusions of pressure and temperature (as in the perception of liquidity) and of pressure, smell and taste. Moreover, any change in any definite direction, as rise in scale, reddening, cooling, blanching, growing blue, can be apprehended as a unitary and independent thing and, hence, becomes a form quality.

According to the definition, relations come under the same heading. But they differ from the qualities that we have been considering. A melody or a square is not simply a sum of likenesses and differences (comparison-relations). A melody is heard, a square seen, but likeness and difference are not seen and heard. And, in the second place, relations involve an activity of the subject, *i. e.*, *comparing*. This activity consists in shifting the attention from one of the related things to another. It is a change and, like every other change, can form the ground for a temporal form quality.

Similarly, the incompatibility of two mutually exclusive ideas (as of a thing that is both round and square) is an ideational element which forms the basis for the negative judgment—the judgment of incompatibility, contradiction. This is to be considered as another instance of form quality.

Thus far, we have spoken only of form qualities which involve relatively simple groups of elements—perceptions and relations ;

groups, we may say, of the first order. Ehrenfels does not, however, stop with these but proceeds to indicate still another class of form-elements; namely, "form qualities of higher order," qualities which are themselves built up out of simpler form qualities.

These structures of higher order arise in two ways; (1) by the comparison of the simple form qualities that we have discussed; *e. g.*, by a comparison of melody with melody or of movement with movement, and (2) by the simple combination of qualities of the first order; *e. g.*, by the union of two or more melodies in a polyphonic composition. Thus we see that form qualities of a higher order are composed, as are those of lower order, by a comparing, 'relating' activity or by a more passive combination of simpler structures.

But this twofold origin of form qualities leads to a difficulty. It introduces the very troublesome concept of mental activity. Ehrenfels takes account of the difficulty by raising the question: in how far does the form quality arise directly from the elements and in how far does it involve a special activity of the intelligence? Mach was explicit on this point. The melody or the space, he said, is just 'there.' It is immediately sensed when the tones or visual qualities are given. There is no question of a special synthetizing activity. Ehrenfels's answer to the question is substantially the same as Mach's. One is, he admits, often conscious of tension, exertion, in apprehending forms and melodies, but this apparent activity in the creation of a form quality is really directed toward collecting the elements into a group. For example, the effort one feels in "taking in" a picture or a melody, as a whole, is expended in bringing together the colors or the tonal elements and not in the construction of the form quality itself. If there were, Ehrenfels argues, a specific activity connected with the form quality, it would surely thrust itself upon attention, since these unique contents play so prominent a part in consciousness. But of such an activity we have no direct knowledge, and the inference is that it does not exist. Even the class of form qualities known as relations involve, only indirectly, mental activity. The "comparing activity" is but the shifting of the focus of attention from one of the related elements (*Fundamente*) to the other. It is concerned, therefore, with bringing together the materials for the form qualities and not with the creation of these qualities themselves. The relation of the "creative activity of the imagination" to form qualities is not so successfully set forth by our author. He seems, however, to intend, even here, that any special activity shall be directed, as before, to the *Grundlage* and not to the new qualities produced; but, unfortunately, he neglects to describe the processes through which this crea-

tive activity operates. One may say, further, by way of criticism, that this particular part of Ehrenfels's discussion is of little value because it contains no adequate analysis of the concept of activity. His general results are, however, important for analytic psychology. In a very great variety of mental complexes,¹ over and above the elements into which the complex falls, there remains, he insists, a mental factor which is a necessary and characteristic feature of the complex;—something which may remain unchanged even though all the elements be altered. This new factor, this 'positive ideational content' is the "form quality."

The position which Ehrenfels takes will best be criticised after its other representatives have been considered. One point in his argument may, however, detain us a moment. It concerns his proof for the existence of form qualities. The proof lies, as we have seen, in the possible substitution of elements without change of form, and it rests upon the 'axiomatic' proposition² that 'sums are more alike the more alike their elements.' This statement is, as it stands, not entirely free from criticism. The word 'sum' has a strong mathematical connotation; but, as it is used by Ehrenfels, it refers plainly enough to the combination of qualitative units. If the 'axiom' be taken in a purely quantitative way, it will not stand without modification. For two numbers, exactly alike, may be the sums of quite different terms;³ *e. g.*, $9 + 8 = 1 + 16 = 17$. That is to say, two like magnitudes may be considered as the sums of very different part-magnitudes. The statement is true, however, so far as it is taken to mean that as much can be got out of a sum as is put into it; so far, *i. e.*, as summing is just piling up like units without regard to qualitative differences. But when the term 'sum' is transferred to qualities, the axiomatic nature of the proposition cited becomes more dubious. Now mathematical formulation becomes inadequate and one is obliged to resort to description. Description becomes necessary, apparently, because qualities can combine in different ways and because the mode of combination is very apt to affect the product. We see this continually in physical science. One and the same element or group of elements has allotropic forms, substances with widely differing characteristics; *e. g.*, graphite and diamond or calcite and aragonite. And, again, organisms

¹ "Gestaltqualitäten enthalten somit die meisten Begriffe, mit denen wir operiren" (page 282).

² "Man kann nämlich von vorne herein behaupten, dass verschiedene Complexe von Elementen, wenn sie in sich nichts Anderes darstellen als die Summe derselben, um so ähnlicher sein müssen, je ähnlicher ihre einzelnen Elemente unter einander sind" (page 258).

³ See A. Höfler, *Psychologie*, Wien und Prag (1897), p. 152.

composed of the same typical elements present great variability of form and function. We may say, in general, that any structure made up of heterogeneous elements—if it be anything more than a mere collection or heap—implies arrangement, plan, pattern, and not simply addition of abstract units. Mechanical processes, even, furnish illustrations. The sand on the vibrating plate falls into definite figures, sediment is laid into a stratum, the mountain is pushed up into a characteristic shape, the cooled substance falls into a determinate form of crystallization. And should we not expect that, in any formation as complex as a mental formation and in one arising under as complicated and variable conditions as it arises, the characteristics of a group should be determined, not only by the elements cohering, but also by the manner in which these cohere?

The combination of qualities must, then, take account of modes of combination and patterns of structure. Such combination cannot properly signify simple addition in a one-dimensional, abstract, number series. Considered thus, Ehrenfels's statement becomes anything but axiomatic. Once we admit that qualitative groups may have properties or attributes or characteristics which are not to be found in the elements grouped, the summing process must either be thrown out of court in any inquiry like the present, where a full description of qualitative components and resultants is required, or it must be modified to suit the facts and thus lose its axiomatic character. It appears equally incorrect to say that, in psychology, $1 + 1 = 2 + x$ or that mental synthesis is a simple process of addition which follows the time-honored traditions of arithmetic. It is no adequate description of the fact to affirm that, when *c* and *g* are sounded together, 1 tone + 1 tone = 2 tones + form quality. The equational form of statement is itself out of place. If psychology had to deal only with groups of simple elements which lie in a one-dimensional series (as 1, 2, 3, . . . *n*) in which no substitution or transposition were possible, the formula of the sum might, perhaps, be applied. But suppose we have such a series as the following: 1, 2, 3, 4, 5, 6, 7, 1', 2', 3', 4', 5', 6', 7', 1'', 2'', 3'', 4'', 5'', 6'', 7''. . . . In this series, a group from the primed section may be more like groups well above and below it than like groups of its immediate neighbors. The matter thus becomes more complicated. And yet this is what we actually do have in the case of melody. We may have the same melody played or sung in different octaves. The point of the matter lies here. Melody is several degrees removed from simple sensational complexes—if by 'sensation' we mean a purely elemental bit of mental furniture. There are a great many things to be known about mel-

ody and several theories in regard to its basis which must be reckoned with before we are in a position to decide on the presence or absence of qualities of forms. Melody is a matter of musical practice and of æsthetics. To understand it, one must understand the various phenomena of fusion, of consonance and dissonance, of clang relationship and the canons of musical structure.

I shall not enter into these things. I point them out only to show that one cannot say off-hand: "melody is more than a sum of sensations and, therefore, contains a new conscious quality which we will call a quality of form."

The illustration from spatial form is not much more convincing. It assumes that the spatial sensation-element is a locality-determination—a 'hereness' or a 'thereness,'—and then asserts that a space form is more than these, because the form may remain while these change, *i. e.*, a form is the same form whether in *this* place or *that* place. It may be answered that the particular theory of space that a man holds decides what he shall consider as the spatial element: it may be a locality-determination, or it may be something quite different. Moreover, the general argument against 'summing' qualities applies here as elsewhere.

Still the problem remains, and we shall look for its clarification in simpler and more unambiguous examples. The fact that both Mach and Ehrenfels have in mind is this. We perceive unitary things and not random qualities agglutinated in haphazard fashion. To these unitary objects of perception must correspond some determination in consciousness. What is it? Is it something in the elements or is it something new added when qualities are combined? In short, what is the 'togetherness' of conscious processes? For my own satisfaction, I conceive the problem in terms of some such simple combination as the simultaneous or successive sounding of two simple tones—say *c* and *g*, or the perception of liquidity or a taste fusion. These give us all the necessary data; the unity of the experience and the elements. Moreover, a group as simple as the fusion or the tonal sequence *cg*, contains everything that Ehrenfels's definition demands for the form quality. The interval—the fifth—remains though the elements be changed; a transportation to *da* or *fc* does not destroy the 'fifthness.' Now we have reduced our form quality to its lowest terms. The question arises, is the "positive ideational content," the *Etwas Neues* still present? Shall we say with Stumpf that there is only a characteristic form of grouping, a fusion of a given degree, of a given unitariness, or is it necessary to admit the inadequacy of the tonal elements given through analysis and to add "qualities of form?"

If we have somewhat cleared the ground provisionally, we may proceed to take up the historical thread of the argument where we dropped it. The discussion is next entered by Professor A. Meinong, of Graz, who, for the most part, seconds Ehrenfels's conclusions.¹ Ehrenfels's negative argument (that like elements produce like complexes) is, he thinks, conclusive; but the more positive arguments for the nature of the new factor in the complex must, says Meinong, be carried further. He objects, moreover, to the term 'Gestaltqualität' on the ground that it is ambiguous and inappropriate. He suggests, as a substitute, the phrase, 'funded' or 'consolidated contents' (*fundirte Inhalte*).

The figure is a very forcible one. It is drawn, without doubt, from the terminology of public and private finance. To fund is to bring together accounts, usually floating debts—temporary debts for whose payment there is no special provision—and to issue, in their stead, stocks or bonds, which mature after a term of years; *i. e.*, various liabilities are brought together and put into a common fund. Creditors may be induced to exchange their claims and become either members of the corporation (by taking capital stock) or permanent bondholders of the company. In either event, the scattered claims are brought together and put upon a firm and permanent foundation. The significance of the process is brought out, even better, by the term 'consolidation' which is literally 'a bringing together and making solid.' It means to compress, to pack together, to make more coherent or compact. We have, *e. g.*, in corporate finance, consolidated bonds which are issued by a railroad company against all the lines of a consolidated system, or by a government, in order to bring together, in one single form of stock, various outstanding debts,—as the famous "3-per cent. consols," provided for by Parliament in 1751.

Funded or consolidated contents, are, then, such contents as are produced by bringing together, in a very intimate way, various part-contents. These part-contents, which are merged in the consolidation, are called the funding or consolidating contents (*fundirende Inhalte*) and the new contents produced by the consolidation are the funded or consolidated contents (*fundirte Inhalte*).

Meinong finds the germ of the funding notion in Ehrenfels, who had spoken of the 'fundament,' the 'foundation' (*Grundlage*) upon which a form quality is built up. Meinong carries the notion further by adding to the foundation or the funding basis, the contents which are funded (or founded).

¹ *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, Vol. II (1891), 245.

He also suggests that since 'fundament' has a specific meaning in comparison (*i. e.*, it refers to the two things which are brought into relation—as when orange is compared with red), it is better to substitute the word 'members' (*Glieder*) for the wider significance. And since a word is needed to cover all the conscious factors involved in consolidation, he proposes the term 'complexion.' The melody, *e. g.*, is a complexion. It contains both the consolidating contents—the various notes played or sung (the members of the complexion)—and the consolidated contents; *i. e.*, the new factor that emerges when the notes are taken together, the unifying factor in the complexion, the "taken-togetherness" itself, the unity of the new fund that cancels the old debts. Meinong is able, by these modifications (which are really nominal rather than essential modifications of Ehrenfels's doctrine), to bring the complexion into connection with the relation. The relation also implies consolidation; for there is the same sort of a unity formed when one thing is related to another as is to be found in the melody or the spatial form. The relation is a certain kind of a consolidation seen from the inside, so to speak; *i. e.*, you compare A and B (set them into relation) and you get a result—'similarity'—which is not in the members. It is really a funded content. Where you get a relation and where you get a complexion by funding your members, has to be determined. In melody, *e. g.*, or in the musical chord, you do not set each element into relation with other elements (that is to say, you do not compare the parts) but you get a unity, a fusion. The elements flow together into a complexion. In comparing red and yellow, on the other hand, there is more of an exertion of the subject and a (similarity) relation emerges. The *funding* is more or less spontaneous, whereas there is a distinct *act* of comparison.

Meinong has undoubtedly thought the matter out more thoroughly than Ehrenfels. Naturally: Ehrenfels broke ground. We have now, in place of the single term, "form quality," the more analytic terms, "members," "complexion," "funding" and "funded contents."¹

More recently,² Meinong has extended his researches into funded contents and has added several new concepts. He brings both complexions and relations together into a more generic class which he calls *objects of higher order*; *i. e.*, objects which are intrinsically dependent upon other objects. The relation (*e. g.*, 'difference'), exists only in connection with objects

¹ Ehrenfels accepts Meinong's new terminology. Cf. *Vierteljahrsschrift für w. Philos.*, XV (1891), 293.

² Ueber Gegenstände höherer Ordnung und deren Verhältniss zur inneren Wahrnehmung. A. Meinong. *Zeitschr.*, etc., XXI (1899), 182.

compared; the complexion (*e. g.*, melody) is built upon the members (tones). The object thus founded, *i. e.*, the object of higher order, is called *superius*, the objects upon which it is built—the things related and the members of the complex—are called the *inferiora* of the higher object. Just when the relation and the complexion have been set side by side as co-ordinate classes of objects of higher order, it is something of a shock to learn that a complexion always implies relations and that relations enter into complexions. It is necessary to follow Meinong into his logical tangle only far enough to see that he means that the members of a complex are set into relation and that this relation is vital to the unity of the complexion.¹ The complexion depends upon the relation and the relation upon the constituent members. It is the relation and the members taken together—not as a sum, as $a + b + r$ —but objects-taken-in-relation that make up the complexion. When, however, Meinong finds, first, a relation, r' , between a and r , then a corresponding relation, r'' between b and r , and relations, again, between these relations, and thus on to infinity, we find the argument unconvincing. Such 'relations' are either psychological fictions or logical abstractions. And, moreover, it must be admitted that the useful term, 'complexion' is indefinitely weakened by an unwarrantable extension of the 'relation' concept. It is to be remarked, also, that the later article is much less significant to us than the earlier one (*Zeitschr.*, II) because it is more epistemological than psychological. It leaves contents (*Inhalte*) for objects (*Gegenstände*).²

¹ The writer cannot avoid the suspicion that this much-used term 'relation' is really employed in two different senses by Meinong—even where he does not give notice of a double meaning: (1) in a wider—the more usual—sense (as a relation of similarity) where he seems to understand by it a conscious act which brings about a togetherness-of-contents ("Bewusstsein des Beisammen," XXI, 197), and (2) in the more restricted sense of simple grouping as in a fusion of auditory or visual elements. In the writer's opinion, the two cases are quite different and should always be distinguished. It is a question, as we shall see later, whether this bringing together of conscious contents is itself a conscious process or act or whether it is not—at least in the second case just cited—a logical formulation, substituted for a simple standing-together-in-consciousness.

² Cf. *Ueber Annahmen*, von A. Meinong, Leipzig (1902). In this most recent discussion, Meinong explains (p. 8) that his earlier phrase 'funded content' should stand 'funded object' since that which is really produced by funding is an object and not an idea (*Vorstellung*). This changes the case not a little. We may readily grant that it is impossible to dissolve an object into a series of sensational elements. But such a concession does not make it necessary to add a new unifying factor to consciousness. If we take into account the fact that mental processes are not only existences but also symbols which refer beyond themselves, to objects, we see that the existential side of the

There is, however, one special divergence in the two articles that deserves to be noticed. In the earlier account, consolidation or funding covers all ideas (*Vorstellungen*) which are dependent on others; *i. e.*, those which have *Grundlagen*. Every complexio and every relation, apparently, involves both funding and funded contents. In the later article, a distinction is drawn between ideal and real relations and complexions, and only the ideal are said to depend upon funding. Real objects are those that exist in actuality, or that may exist, —as a house, a book, a color, a tone. That which does not and cannot have actual existence (*existieren*), although it *is* (*besteht*), is an ideal object (XXI, 198). 'Deficiency,' 'limit,' 'past,' are instances. The distinction of real and ideal is carried over to relations and complexions. 'Similarity' is an ideal relation, 'fourness' (as in the enumeration of four objects) is an ideal complexio; real relations and complexions, on the other hand, are such as are perceivable (*wahrnehmbar*); as the relation between a color and a spatial locality or the complexio of a tonal fusion. In the real relation and complexio, the perception determines the superius; in the ideal relation and complexio the superius is determined by the process of funding. Thus "funding performs for ideas of ideal objects the same function as perception (*Wahrnehmung*) performs for ideas of real objects" (203). The point of this distinction is, if I do not misinterpret the author's very condensed account (he promises to give a full discussion of the subject), that funding is an operation, an act (apparently, a 'judgment,' p. 201) by which an object (superius) is wrought out, 'produced,' from the inferiora. 'Funded objects' stand over against 'objects of experience' (*Erfahrungsgegenstände*). Both arise immediately; the one through the process of funding, the other through the process of perceiving. Just exactly what the difference remains, at the end of Meinong's discussion, almost as much of a mystery as ever. It is not clear why funding should, in the later account, apply to a *single class* of objects of higher order (ideal complexions and relations). The criterion "logical necessity" under which the superius is said to be funded out of the inferiora (as the ideal relation, 'difference,' in the comparison of A and B) seems also—against the author's inten-

object's unitariness may be just the togetherness of the processes as they stand arranged. We should have, then, on the side of consciousness, merely the plan of arrangement of processes and, on the side of the object, the functional aspect of this plan or pattern; namely, the unitariness, the wholeness, of the object perceived. At all events, we must keep distinct the psychological and the epistemological problems of perception. Then we shall see that the establishment of a cognitive 'fund' need not imply a corresponding 'fund' among sensational elements.

tion—to cover cases of real relations and the “objects of experience” which are based upon them; *e. g.*, an interval in tonal fusion (one of Meinong’s instances of a ‘real relation’) follows as inevitably from the nature of the tonal elements involved as the judgment ‘different’ from the comparison of red and green. If funding is dependent upon “logical necessity” in the emergence of the superius, why, then, is not the fusion as truly funded as the (ideal) difference-relation?¹ In the case of melody Meinong does admit this ‘logical necessity’ that makes the melody a funded complexion. But how the melody can be unequivocally determined by the elements (tones) and the fusion not, it is difficult to see.

Some additional light is thrown upon the subject of consolidated contents by H. Cornelius (Privatdocent in Munich). Cornelius,² instead of starting from simple contents and asking what occurs when these are brought together, starts with the complex, which he calls the fusion. He affirms that the primary mental structure is a whole which is only gradually broken up into parts by the analyzing process of attention. What do we see in a thing, Cornelius asks, before we come to know it intimately? Why, he answers, a big, unanalyzed, undissected mass (*Gesammteindruck*). Just a whole. Precisely as the unmusical individual hears a chord without analyzing it or as most of us hear the clang color of a musical note or perceive a face. By attending, now to this part of the mass and now to that, we are led to the inference that the mass is really complex, made up of parts. If this critical scrutiny be repeated often enough, the mass finally falls to pieces without an effort; *i. e.*, we analyze ‘on sight’ and spontaneously. And when we do—and this is the important point—something disappears, is lost. Analyze your note and clang color disappears; play your melody slowly enough to make it fall to pieces and only a detached series of notes is left. This change, says Cornelius, is an actual loss in contents. Thus he comes to the same conclusion in regard to the existence of a unique factor in the complex, or the complexion, as Ehrenfels and Meinong

¹ Just as this article was ready for the press the important monograph “Ueber Annahmen” came to the writer’s hand. The monograph gives a systematic setting to the phenomena of funding, of complexions and of objects of higher order. Unfortunately, no adequate account can be taken of it here. It seems, however, to represent the same position in regard to the concepts with which we are dealing as the *Zeitschrift* article (XXI) to which we have made frequent reference. “Logical necessity” is again given as the criterion of consolidation. “Fundirte Gegenstände sind mit ihren Fundamenten durch Nothwendigkeit verknüpft” (p. 12).

² *Vierteljahrsschrift für w. Philos.*, XVI (1892), 404, and XVII (1893), 30.

who worked up from below instead of working down from above.

If we grant Cornelius's presupposition, then, we get additional evidence for qualities of form (Ehrenfels) or consolidated contents (Meinong). For if some 'positive conscious content' is lost in analysis, it is quite possible that this is no other than the funded content which characterizes Meinong's complexion. Funded content means, however, for Cornelius, the 'sensation-whole,' the unanalyzed fusion and not, as for Ehrenfels, something added to the sum of the parts. It is to be noted, moreover, in passing, that, although Cornelius and Meinong both contend for the existence of funded contents, their theories of analysis are radically different. Meinong (who is happiest when he is standing sponsor for a concept) develops an elaborate terminology and technique to explain the process of analysis.¹ It should be remarked that it makes little difference to our main problem whether the fused undifferentiated whole (*Gesamtvorstellung*) or the analyzed complex were the original type of mental formation. Our primary question is a question of content and not of origin.

One further point only is it necessary to mention. Although analysis, the breaking up of a whole, does not create the sensational elements, it may, nevertheless, says Meinong, alter the funded contents. In the clang, *cg*, for example, one gets different funded contents and, therefore, different complexions according as one attends to *c*, or to *g*, or to *cg*. To state the matter in general terms, the process of funding and the character of the complex depend not only on the quality and the intensity of the funding contents (the inferiora) but also upon the direction of the attention. It is to be noted that both Meinong and Cornelius go a step beyond Ehrenfels in this particular. For Ehrenfels, the funded contents are maintained so long as the relation of the parts is maintained. Transposition, *e. g.*, does not destroy the funded melody. For Meinong and Cornelius, on the contrary, the funded contents can be altered, even without change of elements, by a shift of the attention. For the later writers, then, funding is a more subjective process, more independent of external conditions, than it is for Ehrenfels.

An addition to our systematic knowledge of complexions is made by Stephen Witasek (a pupil of Meinong at Graz). Witasek² works out Ehrenfels's instances of *Gestaltqualitäten* which are themselves based upon other *Gestaltqualitäten*; *e. g.*,

¹ For Meinong's views of the function of analysis see *Zeitschr., etc.*, VI, 340 and 417. Cornelius's account of fusion and analysis should be read in connection with Stumpf's *Tonpsychologie*, Vol. II.

² *Zeitschr., etc.*, XIV, 401.

a polyphonic composition made up of different 'voices,' each of which is itself a complexion. These complexions, which are twice removed from simple unfunded elements, or members, he calls "complexions of higher order." (This term is to be kept distinct from Meinong's "objects of higher order" which embrace the objects of *all* complexions and relations).

The most important part of Witasek's article deals with the formation of complexions. Some complexions, he says, are made quite automatically. The partials in the note combine (are funded) in a perfectly unequivocal and effortless way, producing the clang with its characteristic color. The case is similar with the melody. The funding does itself, so to speak. But in the case of complexions of higher order, the possibilities for funding are increased. In a contrapuntal arrangement, *e. g.*, one might find each voice funding by itself and then uniting with other voices as a complexion of higher order, or the primary complexions might be harmonic complexions between the simultaneous parts of the several voices, or, again, the funding might proceed quite irregularly by combining successive notes from different voices. These and still other possibilities arise where complexions of higher order are involved.

The complexion that actually does issue from all these possibilities is decided by many things. The first prerequisite is that a group of elements should be disentangled from the mass. This is often accomplished externally; *e. g.*, the solo voice is more intensive than the accompaniment. Then, too, it has its own distinctive clang color to set it off from the other sounds and to hold it together. And, finally, spatial position and pitch may also contribute. But beyond these external conditions, Witasek sees a special activity of the subject working upon the members, when they do not, of their own accord, fall into definite complexes.

At this point there is a dissenting voice raised on the subject of funded contents. F. Schumann (Stumpf's assistant in Berlin) takes the field against the champions of consolidation.¹ Schumann gets his bearings from unpublished lecture notes of G. E. Müller's. Müller had said that we apply various predicates to both simple and complex mental contents by noting the similarity of these contents to others and by placing them in various groups.² A simple tone, *c*, falls into an intensity group, a quality group (the one-dimensional scale of pitches), and a clang color group. In a similar way, mental *complexes* evince similarities and fall into groups. In the second case, no more than in the first, is there a special relating activity, a

¹ *Zeitschr., etc.*, XVII, 106.

² Essentially the same as Hume's argument on the *distinctio rationis*, *V Treatise*, Bk. I, part I, sec. vii.

higher mental faculty involved. This statement seems, to Schumann, to stand directly against the contention for a new kind of relating activity which is involved in the theory of funded contents.¹ Having taken his general position, Schumann proceeds to criticise more circumstantially. Ehrenfels's negative proof has, he thinks, some weight; but the inference to the 'positive ideational contents' is unwarranted. Melody is a poor illustration because it has not yet been sufficiently factored for us to tell what it contains² and the "determinations of position" (*Ortsbestimmungen*), the elements out of which spatial figure is said to be funded, are fictitious elements from which no conclusions such as Ehrenfels's can be drawn. Moreover, Stumpf has disposed of clang color (as Meinong himself admits) by referring it back to a 'tonal color' in the elements and temporal unities may be shown to be bare sensational stuff. The unitariness, the wholeness of complexes, upon which so much stress has been laid, is, first of all, for Schumann, a unitariness in the sense that the complex *functionates as a whole* in influencing reproduction, judgment and feeling. Schumann is of the opinion that the 'funded' part of the complexion may be resolved into feelings and accompanying ideas.

This destructive criticism is couched in too general terms

¹ Precisely how the champions of consolidated contents conceive the 'activity' to which Schumann objects, it is not always easy to decide. Ehrenfels denies, as we have seen, any special activity. Meinong disagrees with Ehrenfels's argument that the form quality is given invariably with the elements (*op. cit.*, II, 260). Elements are funded only under quite definite conditions. There must be an act of the subject; and, in comparison, Meinong maintains, "the subject must contribute considerably more than in the perception of form or melody and yet, even here, not all is left to the funding contents." In another place (XXI, 201), Meinong says that the superius, 'difference' (as in comparing A and B), demands not only an act of judgment (and "Alles Urtheilen ist ein Thun"), but also a working over of the materials with which the judgment has to operate. Again (XXI, 204), funding is spoken of as a 'process' (*Fundierungsvorgang*), which may be ushered in by what are called the "higher intellectual operations." Still again, funding is called a "produciende Thätigkeit" (*Ueber Annahmen*, page 9). Witasek goes still further and declares for a synthetizing activity by means of which the will exerts an influence on the formation of complexions of higher order. "Der fundierte Inhalt ist nicht lediglich Resultat eines blind wirkenden psychischen Mechanismus, sondern wir selbst fassen nach eigenem Ermessen die einzelnen Bestandstücke zu diesen oder jenen Gruppen zusammen und bedingen so die Form derzubildenden Komplexion höherer Ordnung." (*Zeitschrift, etc.*, XIV, 426.)

² This objection differs from the one urged above (p. 277). Schumann pleads general ignorance of melodic form. My own contention was that the theory of formal elements does not take account of what is actually known about melody. It presupposes that melody is just tonal sensations or these *plus* a form quality. Meinong's reply to Schumann (XXI, 222) does not touch this point.

and is too little thought out to be entirely convincing, but it is, nevertheless, vigorous and pointed. Meinong replies¹ at length taking up Schumann's points in great detail and reaffirming his old position taken several years previously.² Cornelius,³ on the other hand, thinks that he sees a chance to reconcile Müller's view (which he himself has sustained in his *Psychology*⁴) with the doctrine of Ehrenfels and Meinong. Just as quality and intensity and extent are attributes or modifications of the sensation, so, he maintains, are form qualities and funded contents attributes or modifications of complexes. And they are brought out in the same way; namely, by noting the resemblance of the sensation or of the complex to other sensations or other complexes; by putting it in a group. It is, therefore, not correct to speak of the modification or attribute (*Merkmal*) of a complex as a new content which depends upon the juxtaposition of elements, unless one means by 'content' abstract content; that is to say, one got by abstracting a single aspect, as the 'fifthness' of the fifth or the 'thirdness' of the third. There is, Cornelius continues, no reason why the similarities of complexes should depend upon the similarity of their parts. They may be functions of the complexes as wholes. The form quality is not, then, as Ehrenfels and Meinong say, a new positive content (*Inhalt*) but an attribute, a characteristic, a property (*Merkmal*).⁵ We shall, then, have to speak of 'fundirte Merkmale' instead of 'fundirte Inhalte.' Considered thus, form quality is just a name for the similarity of complexes, but is not an explanation. It is a matter of direct experience.

Cornelius still leaves unanswered the question, 'how do these new similarities between complexes arise?' He does this purposely, because he is writing what purports to be a purely descriptive psychology; a plain account of conscious events. Professor Lipps, on the other hand, who believes in an explanatory, as well as a descriptive, account of mind, insists⁶ that the form quality rests on unconscious psychical processes. In the connections obtaining between mental contents we see only a product. The real causal factors that produce the contents and the connections between them lie behind the scenes, inaccessible to experience.

This view of funded contents, is, one may easily say, as

¹ *Zeitschr., etc.*, XXI (1899), 205.

² *Ibid.*, II (1891), 245.

³ *Ibid.*, XXII (1899), 101, and XXIV (1900), 117.

⁴ *Psychologie als Erfahrungswissenschaft*, Leipzig (1897).

⁵ For a criticism of Cornelius's Theory of Abstraction, see Meinong, *Zeitschr., etc.*, XXIV (1900), 34.

⁶ *Ibid.*, XXII (1900), 383.

strong or as weak as the general Lippsian doctrine of unconscious psychical processes.

With the admission of the funded content as an attribute or a characteristic, we begin to see the end of this long and involved discussion. F. Schumann writes again,¹ giving a large number of significant instances from the domain of visual perception and accepting Cornelius's view of the funded factor as an attribute (*Merkmal*) which rests upon a peculiar and close consolidation of elements in a complex. He shows that in spatial figures there is a greater or lesser unification of the parts which corresponds closely to the fusion degrees of tones;² *i. e.*, an approximation of a complex to a single impression. The unitariness is an attribute of the complex which makes it possible to judge the likeness and difference of complexes as such. *E. g.*, the essential characteristic of the square is the like value of the sides (as against the oblong whose two long sides are characteristic) and the rectangularity of the corners. We do not stop to figure these characteristics out, but they strike us at once; they are an immediate "sensuous moment" (*cf.* Mach's term, "space sensation").

G. F. Stout has given in his *Analytic Psychology* (1896) some account of form qualities and funded contents. Stout's position is essentially the same as Ehrenfels's and Meinong's; though his theory of analysis, as a process which works a fundamental change in mental contents, or 'presentations,' is much like that of Cornelius. For Ehrenfels's 'Gestaltqualität,' Stout substitutes the phrase 'form' or 'plan of combination.' He uses the old arguments to show that the apprehension of form is a "constituent of consciousness comparable . . . with the perception of red or blue" (Vol. I, p. 66). It is not, then, simply a mode of mental combination, but a distinct kind of consciousness.

It is time now to ask, 'what is the real outcome of all this discussion over form qualities, complexions, and objects of higher order?' Psychology has certainly gained from the long decade of debate. If the whole mass of literature, which we have only just glanced at, did nothing more than fill, even temporarily, a gap in the psychological system, it would serve an important purpose. But it does more. It shows, in the first place, how misleading is such a rubrication as 'sense' and 'intellect.' Mind is not so simple as that one can say of a

¹ *Zeitschr., etc.*, XXIII (1900), 1.

² The fusion is not, to speak strictly, a characteristic, or *Merkmal*, if by fusion we mean fused contents. It is only the 'fifthness' or 'thirdness' or 'octaveness' which would be considered the new characteristic of the fused complex.

mental formation, 'this is either a sensation that has found its way into mind or a sheer spiritual creation that mind has evolved.' We must reject this unfortunate dichotomy and ask quite concretely the question that we raised at first; namely, "what is the actual plan of mind?" And it is not difficult to see that the investigators whom we have been reviewing have begun at the right end of the problem. They have, *i. e.*, taken comparatively simple instances that do not fall wholly either under 'sense' or under 'intellect,' but which stand on the dividing line. The first point raised was this: are these simple perceptual groupings just sensations (Mach) or are they something more? The writers who contended that they were 'something more' have been concerned to show precisely what the new factor is and what relation it bears both to 'sense' and to 'intellect.'

In the second place, the discussion has shown that a complete descriptive account of a mental complex demands more than an enumeration of its constituent elements taken as isolated units. The complex does not 'feel' as a sum of such elements would feel. This is true whether the 'funding' concept be valuable or worthless.

And, finally, the problems which have been raised in the literature give psychology a good opportunity to test the validity and the adequacy of its mental structures. If its elements prove inadequate when one comes to synthesis, they must either be augmented or their claim to represent the whole of mental tissue must be recalled.

But, even though it be granted that the discussions referred to have borne fruit, we must admit that the specific problems raised have not all been satisfactorily solved. There are, in the writer's opinion, two general criticisms of the results that remain to be made. (1) Where a new 'funded' factor has been found necessary, the true nature of psychological elements has not, as a rule, been kept in view. (2) The concept of 'activity' in the process of funding has not been made clear and unambiguous.

Unfortunately, a specific justification of these criticisms and a positive contribution to the subject would call for a separate article. It may not be impossible, however, to indicate, in a few words, the direction which, it seems to me, promises quickest approach to a solution.

The two concepts to conjure with are the concepts of analysis and attention. It is useless to attempt to decide on the existence of funding contents or funded objects until an agreement is reached on the *quale* and the functions of analysis; and it is, likewise, futile to dispute over the mental activities in-

volved in funding until the possibilities of attention have been exploited.

What I may have to say on these two topics will, perhaps, be more intelligible if I state, first of all, my own conviction on the general question involved. The hypothesis of distinctive and unique conscious structures which characterize mental complexes is to be entertained with caution, if not with suspicion. Their intemperate use in certain of the treatises that we have discussed is both unnecessary and indefensible. I prefer to say that the essential nature of a complex is determined, not by a funded or formal factor, but by the character of the elements themselves, the connections into which they fall and the state of attention in which the complex is given.

The theory of funded elements derives its chief plausibility from an inadequate definition of element. Reference to our two types of analysis (p. 271 above) will make this clear. External analysis, which fixes attention on stimulus and, particularly, on the progressive simplification of stimulus, is certain to yield abstract, artificial, isolated and self-centered units—as 'red' 'strain,' the tone 'c' 'pressure,' 'sweet,' 'pleasantness,' etc. Such elements as these are always oblivious to every existence but their own.¹ Each quality is self-contained, sufficient unto itself. This view of elements finds, it is true, ample justification. It is a wonderfully serviceable view in mental analytics. But the point is that the view is *essentially* analytic. If we want to know what mind is like in the concrete, we must supplement the type of analysis by the second, internal, type. That is to say, we must explore all sides of a complex, as a *complex*; e. g., the visual colligation or the auditory fusion or the melodic sequence. We must search out, in turn, the constituent parts of the complex, while the unanalyzed or half-analyzed remainder is maintained in the background. By this procedure, only, do we get at mental elements as they stand in connection, as they make up the actual living tissue of mind.² The element then becomes a simple thing, but a thing with its connections upon it, with its real 'local signature' in the anatomy of mind. But if the element is a being with a *status*, with

¹ It is, apparently, this kind of a mental element that James rejects with so much fervor in his chapter on The Mind Stuff Theory (*Psychology*, I, ch. VI). In his impatience at associationists, James overdoes himself in asserting that we cannot "mix feelings as such." He is even led to the absurd statement that the taste of lemonade does not include the qualities acid and sweet (p. 158).

² Cf. C. Stumpf (*Tonpsychologie*, II, p. 279): "Als Teilerscheinungen im weitesten Sinne können wir schliesslich nicht bloss die in einer Vorstellung enthalten absoluten Elemente (die einzelnen Töne, Linien) bezeichnen, sondern auch die zwischen zwei solchen Elementen stattfindenden Beziehungen."

a place to fill in one group or another, what more is needed to make up the group than just these elements and the plan of arrangement, which is nothing but the elements taken together? Does not the 'funded content' become superfluous? Nevertheless, two things remain to be said by way of adding plausibility to the position. (1) The peculiar unity of the complexion (Meinong) may serve as an argument for a 'plan of arrangement' as well as for a funding process. This unity—whether it take the form of 'fifthness,' or 'octaveness,' or 'squareness,' or 'rectangularity,' or 'violinness,' or 'trumpetness'—need not be the result of a 'unification' content, apart from the ordinary visual or auditory elements. These things are simply the mode, the pattern, in which the elements (as revealed in internal analysis) are set forth. They represent group-characteristics for which, to be sure, we shall look in vain in the abstracted elements of external analysis. Nevertheless, they call for no special conscious moment foreign to the constituent members themselves.

In the second place (2), no account of the psychology of complexes—even of the simplest complexes—can be completed without reference to attention. The skeptical reader may have anticipated the argument at this point by saying that here at last the *Etwas Neues*, the *deus ex machina*, must reveal itself. But, surely, this depends entirely on what one means by attention. Of course, if attention is a particular process among other processes, appeal to such a factor will not remove the difficulty which we are trying to avoid. But, if attention be conceived as a *state* or *condition* of consciousness, with well-marked characteristics and perfectly definite consequences, it may well be that it is the one moment that is lacking to our explanation. It will be such a moment only on condition that the attentive consciousness is a synthetizing consciousness, only on condition that the formation of mental complexes is one of the functions of the attentive consciousness. This is not easy to prove—although it is accepted by many psychologists. A demonstration of the point really requires a theory of attention. It would be foolish to attempt even the outline of such a theory at this late point in the argument. There are, however, two sets of facts which may be set down as favoring a synthetic function of attention. In the first place, introspection bears witness to the fact that objects present themselves as wholes while we attend. *Because* we analyze under attention is no proof that we do not, at the same time, synthesize. Experience, it is true, comes in 'lumps' to the inattentive consciousness. But these lumps are not the unitary objects of perception that stand before consciousness when its parts have been not only brought into focus but also brought together in

definite arrangement. Our second argument falls to us from genetic psychology. One of the principal functions of the nervous system is to collect and to co-ordinate the experiences of the organism. It brings together the various aspects of a situation and reflects them in consciousness. It is easy to see that attention to a 'situation' rather than to a disconnected set of sensations and feelings is the more favorable to the organism. Hence we may well suppose that one of the results of natural selection has been to sanction the tendency to attend widely and to group comprehensively the elements of an experience.

At the same time, this argument from genesis proves to be more than an argument for a synthetizing attention. It also confirms our general remarks about plans of arrangement, for it shows us that the simpler mental groups, at least, have been made at the behest of nature. They correspond to situations which have appeared over and over again in the history of the individual and of the race. We can pick out hundreds of spatial and temporal and qualitative groupings which have got themselves formed by persistent and united appeal to the organism; tactual perceptions, smell and taste complexes, auditory fusions, perceptions of bodily position. It is, then, rather the finger print of nature that we trace, first of all, in the 'complexion,' than the operation of a unique mental factor.

The arguments from attention are, I admit, inconclusive. My reasons for bringing them forward are simply these. I have emphasized the concept of attention because it is one of the corner-stones of every modern psychological system; because it has been thoroughly analyzed, and because it is, without any doubt, closely connected with the phenomena which we have been discussing. Every descriptive account of mind involves the attention; from Herbart down, the concept has been exposed to a searching criticism—we know, now, its characteristics, its concomitants and its effects;—and, finally, it lies at the basis of perception and of thought. Why not, then, use it, alongside the concept of analysis, in preference to any ambiguous and misleading 'productive activity' or 'interference by the subject,' or *psychisches Zuthun* or 'newly created content,' in analysis of the complexion?

I may say, however, that in spite of divergence of opinion, Meinong's concept of 'complexion' has, to my mind, much to recommend it. It is an improvement on Ehrenfels's 'form quality' because it emphasizes the organization of elements rather than the *mere* addition of a new quality. Meinong does not, however, move far enough in the direction of organization. His notion of funding or consolidation is, after all, hardly in accord with the facts. These terms suggest too strongly the

obliteration of the elements at the expense of the funded contents. To speak strictly, funding, in the literal sense, is only the extreme limit of the process of unification—a limit seldom, if ever, reached in experience.

I should suggest in place of 'funding' and 'complexion' the terms 'incorporate' and 'incorporation.' 'Incorporation' has the advantage of covering all grades of dependence and independence of the parts; and, at the same time, it suggests intimate union, close organization. Furthermore, instead of implying a new conscious structure, it emphasizes the characteristics and functions of the incorporated mass, taken as a whole.

It is only fair to say in closing that the various terms that have been proposed in connection with the present discussion really cover a heterogeneous mass of psychological material which stands in sore need of classification. There can be no doubt that the simple fusion of tones and the judgment of similarity between objects—to take extreme cases—involve very different mental processes. The clearing up of these differences and the systematic envisagement of the general question are, at present, perhaps, the greatest desiderata in the problem of mental arrangement.